**Universal Communication Gateway**

*ipConv* is an universal communication gateway for data transmission between different protocols. As a system for protocol conversion, it is suitable for coupling heterogeneous controllers, fieldbus devices, and telecontrol systems.

Available with powerful high-end devices, *ipConv* is suitable for demanding large-scale projects: The system is able to process up to 400,000 node variables and transmit up to 40,000 information changes per second.

The multitude of communication interfaces available complete the flexibility and expandability of the system.

- Security at the highest level (see Cyber Security)
- Communication between multiple data sources
- Simultaneous use of diverse protocols
- No programming required for configuration (see Configuration)
- Simple control unit connection
- Intelligent information processing
- Maintenance free operation
- Redundancy

**FUNCTIONAL RANGE**

- **Configuration**
  Configuration and maintenance of the system is conducted through the integrated web interface, which provides central access to all settings and services. Microsoft® Excel templates are provided to simplify data point configuration. In addition, the web interface enables the import of files and updates, such as:
  - Firmware (application and operating system)
  - Excel configuration spreadsheet (signal table)
  - X.509 certificates
  - License files

- **Cyber Security**
  Secure access to all administrative services (HTTPS, SSH, SFTP)
  - Role-based access protection with login and password
  - User administration for local users
  - Central user administration via Active Directory (LDAP) and/or RADIUS
  - Crypto Store for certificate management
  - Creation of self-signed certificates and Certificate Signing Requests (CSRs)
  - Import and export of certificates
  - Configuration of VPN tunnels (OpenVPN and IPsec)
  - Firewall
  - Safeguarded real-time Linux operating system

- **Data processing**
  - All data is broken down into individual information (single indications, measured values, counter values, etc.) and processed accordingly. A quality identifier and - if necessary - a time stamp is associated with each information item.
  - Namespace and data model can be changed as desired.
  - Powerful functions for data processing such as type conversion, scaling, grouping, etc.
  - Data reduction / regulation of bandwidth, required on secondary side, via update intervals, threshold values, old/new comparison, collective messages, selection of data points, etc.

- **Network features**
  - Assigning multiple IP addresses to one physical Ethernet interface
  - Network management using an integrated SNMP agent
  - NTP based clock synchronization
  - HTTPS/SSH/SFTP access
  - DHCP
  - Bonding
  - PRP
  - VLAN

**SUPPORTED PROTOCOLS**

- OPC UA
- OPC DAXML
- IEC 60870-5-104
- IEC 60870-5-101
- IEC 60870-5-103
- DNP 3.0
- IEC 61850
- TASE.2 / ICCP
- ELCOM-90
- Modbus
- PROFINET
- PROFINET
- SNMP
- Simatic Fetch/Write
- REST
- MQTT Client
- Database Client
- Email Client
- GI74
- RP 570/571
- TG 80x
- SEAB 1/F
- Sinaut ST1
- Indactic 33/41, 2033

Further protocols on request!
The redundancy coupling can be realized via Ethernet as well as over serial connections. If separate serial communication connections must be connected to both redundant devices, the CS channel switch will be applied.

For detailed technical data on the IPC191V4 and IPC191I7 models, please visit www.ipcomm.de